

Preliminary Amendment

**REMARKS/ARGUMENTS**

Claims 2-11, 13-16 and 18-20 are pending in the present application. It is respectfully requested that the Examiner reconsider the rejections of claims 2-11, 13-16 and 18-20 based on the present amendments and remarks.

**Specification**

The Examiner states that the spacing of the lines of the specification is such as to make reading and entry of amendments difficult. Hence, new substituted specification with lines double spaced on good paper, as the Examiner requests, is enclosed in the present Request for Continued Examination.

**Claim Objections**

Claim 7 is objected to because of the misspelled term "triallylamin". Appropriate correction, as required, has been made in the present amendment. Hence, withdrawal of the objection to claim 7 is respectfully requested.

**Claim Rejections under 35 U.S.C. § 112, second paragraph**

Claim 7 is rejected under 35 U.S.C. § 112, second paragraph, because of an improper Markush grouping. Amendment has been made, as the Examiner suggested, to overcome this rejection. Hence, withdrawal of the rejection of claim 7 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

**Claim Rejections under 35 U.S.C. § 103**

Claims 2-11 and 13-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vyshkina '965 in view of EP 0072214 and further in view of EP 0072213. Vyshkina '965 relates to a method for treating

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solid wastes contaminated with heavy metals by the application of high molecular weight polyacrylamide. According to the specification, this method can entrap such heavy metal impurities in the form of non-toxic stable solid material usable for backfilling, road construction subbase, landfill closing-up etc. (column 1, lines 5-16). To realize this object, a solution of anionic synthetic organic flocculant is used for washing a sludge of the contaminated soil at pH 9-12, followed by other steps including separating the liquid and solid phases of the washed soil sludge and further treating the liquid phase with an alkaline reagent etc. The anionic organic flocculant can be polyacrylamide (see column 8, claim 9 and 14).

Both EP 0072213 and EP 0072214 relate to water retentive polymeric compositions useful as plant growing media additives.

The Examiner stated that Vyshkina's process of washing the soil with a solution of the polyacrylamide at a certain pH meets Applicants' claim limitation "applying to the contaminated soil... a compound selected from the group consisting of ..."

Vyshkina does not disclose that the polyacrylamide is crosslinked, nor the process for making the polyacrylamide. According to the Examiner, EP0072214, however, discloses a process of making crosslinked polyacrylamide. Hence, the Examiner concludes that it is reasonable to expect that the compound of EP 0072214 would be able to perform the utility disclosed in Vyshkina.

Applicants respectfully traverse the Examiner's rejection of claims 2-11, 13-16, and 18-20 as being obvious under 35 U.S.C § 103 (a).

Firstly, Vyshkina's process of washing the soil with a solution of the polyacrylamide at a certain pH does not meet Applicants' claim limitation "applying to the contaminated soil... a compound selected from the group consisting of ...." Claim 13 of the present invention recites a process for reducing the presence of heavy metals in plants growing in soil contaminated with heavy metals. The process comprises applying to the contaminated soil a heavy metal reducing effective amount of a compound selected from the group

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consisting of cross-linked polyacrylates and polymethacrylates. Vyshkina's process washes a sludge rather than the contaminated soil where the plant grows. Hence, Vyshkina's process does not meet the limitation "applying to the contaminated soil... a compound selected from the group consisting of ....", where the contaminated soil is located at the place that the plant grows. The Examiner may deem the limitation of the contaminated soil where the plant grows is in the preamble, and thereby does not deem it a meaningful limitation in claim 13. In the present amendment, the "contaminated soil" is specifically recited in claim 13 be located where the plant grows. Therefore, the limitation of the contaminated oil where the plant grows is necessary to "give life, meaning and vitality" to claim 13.

Moreover, polyacryamide is water soluble, which is desirable when it is used in a solution as an anionic flocculant as disclosed in Vyshkina. The enclosed reference Ullmann's Encyclopedia of Industrial Chemistry, Vol. A 28, P. 57 (attached as Exhibit 2) provide evidence of this. On page 59 the enclosed reference discloses that flocculants are high molecular mass water-soluble polymers and are dosed in the form of a solution. Crosslinked polyacrylamide is not water soluble, or is much less soluble than polyacrylamide, and possesses good water retention and absorption ability, which is desirable when it is used as a plant growing media additive as described in EP 0072214 (see page 2, lines 22-33). Hence, the polyacryamide in Vyshkina and crosslinked polyacryamide in EP 0072214 are used for completely different purposes. Polyacryamide and crosslinked polyacryamide are not interchangeable with each other. Specifically, the crosslinked polyacryamide cannot be used, or at least cannot be used as well as non-crosslinked polyacramide, as an anionic flocculant as disclosed in Vyshkina. On the other hand, non-crosslinked polyacramide can not be used, or at least can not be used as well, as crosslinked polyacramide, as a plant growing media additive as disclosed in EP0072214. There is thus no basis to combine the teachings of Vyshkina and EP0072214. Even if a skilled artisan would have combined the

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teachings of these references, the skilled artisan cannot obtain the expected results as the Examiner described.

According to MPEP 2143.01, if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is not suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900.

For at least the forgoing reason, claim 13 of the present invention is not obvious under 35 U.S.C. § 103(a) over Vyshkina in view of EP 0072214 and EP 0072213. For at least the same reason, the remaining pending claims 2-11, 14-16 and 18-20, depending from claim 13, are not obvious under 35 U.S.C. § 103(a) over the cited references. Withdrawal of the obviousness rejections of claims 2-11, 13-16 and 18-20 is respectfully requested.

This preliminary amendment is presented to place the application in better form for examination. No new matter has been added. Early examination and favorable consideration of the above-identified application is earnestly solicited.

Any additional fees or charges required at this time in connection with the application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,  
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